

## Trane TRACE: The Basics to Get Started

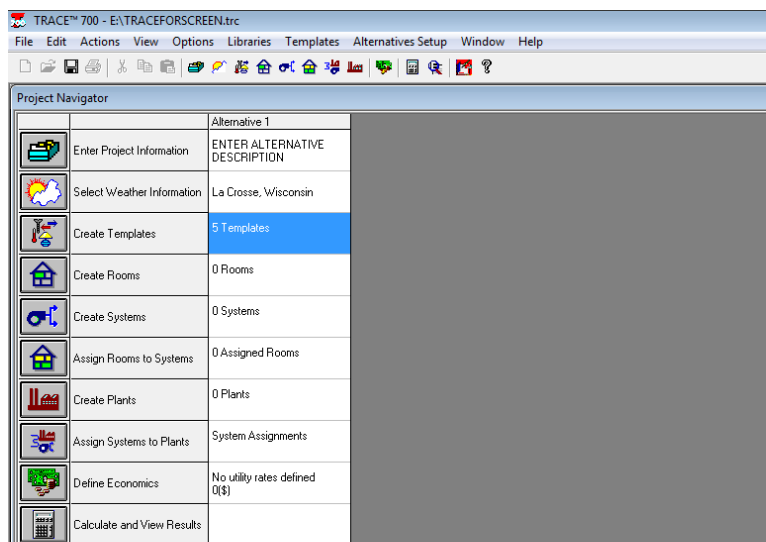
The purpose of this Wiki is to explain the basics of Trane TRACE so that a new user can become more familiar with its user interface, understand the modeling process and get started.

### Table of Contents

- [Views](#)
- [Enter Project Information](#)
- [Select Weather Information](#)
- [Create Templates](#)
- [Create Rooms](#)
- [Create Systems](#)
- [Assign Rooms to Systems](#)
- [Create Plants](#)
- [Assign Systems to Plants](#)
- [Define Economics](#)
- [Calculate and View Results](#)

### Views

**Project Navigator:** This is the default view used by TRACE. It is simple, and pretty self-explanatory. Keep in mind that although there is an order suggested by these views, you don't necessarily have to follow it exactly.



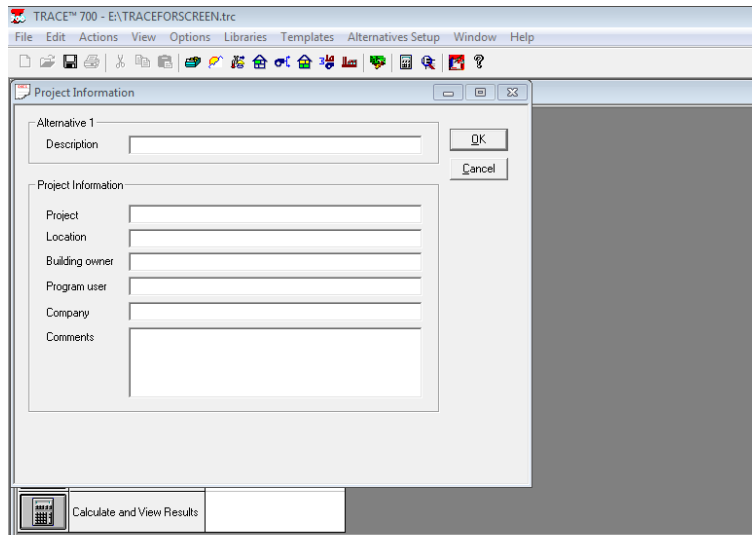
Component Tree: This alternate view has essentially the same information with more detail.

Project Information	
Project Description	
Location	
Building Owner	
Program User	
Company	
Comments	
Continent	United States
Region	North Central
Weather Location	La Crosse, Wisconsin
Summer Dry Bulb (°F)	88
Summer Wet Bulb (°F)	75
Winter Dry Bulb (°F)	-9
Summer Clearness	1
Winter Clearness	1
Summer Ground Reflectance	0.2
Winter Ground Reflectance	0.2
Carbon Dioxide Level	400

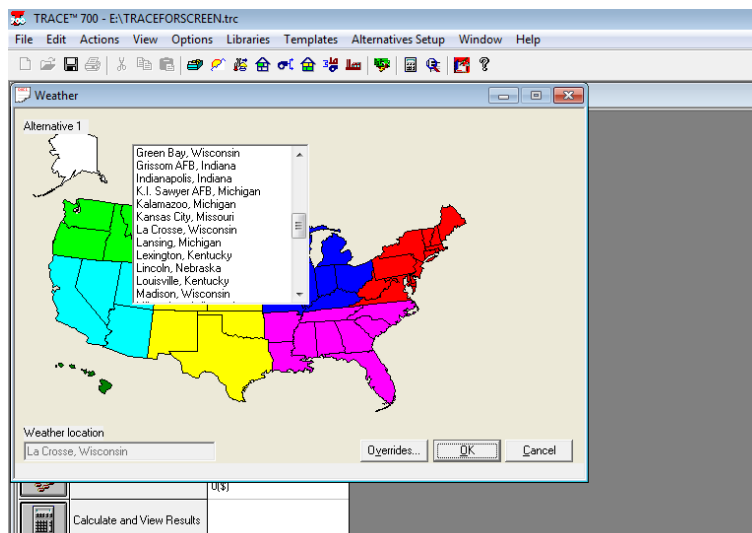
Project Tree: This view is very similar to the Component Tree view, but also contains a search feature at the top.

Project Information	
Project Description	
Location	
Building Owner	
Program User	
Company	
Comments	
Continent	United States
Region	North Central
Weather Location	La Crosse, Wisconsin
Summer Dry Bulb (°F)	88
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**Enter Project Information:** Here is where you enter information for the building project with fields including alternative description, project, location, building owner, program user, company and finally comments. An alternative in TRACE is a way for you to model a building in a different way, be it different materials, or using different systems for example.

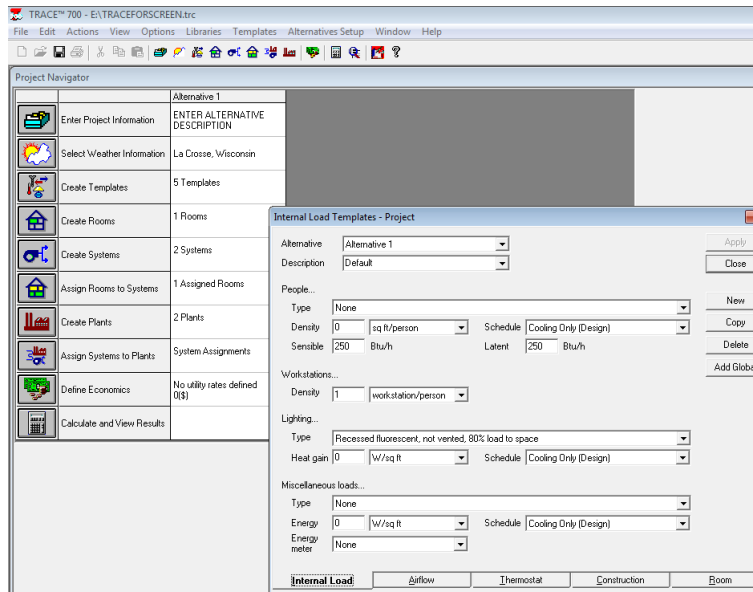


**Select Weather Information:** Start by clicking on the colored area in which the project is located. This will bring up a dropdown menu with various locations, then select the appropriate city and state. If your specific location isn't there,



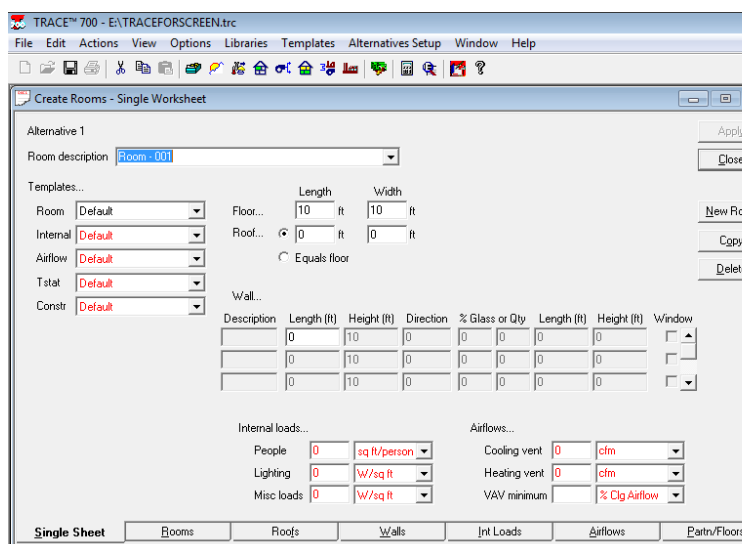
data online (one source is the Department of Energy (DOE) website). Make sure when you download the weather data that it has one of the following file extensions: TMY, TM2 or TM3. To load the downloaded weather data, click on libraries on the top menu, then click weather, then import, and select the downloaded weather file.

**Create Templates:** Here is where internal load, airflow, thermostat, construction, and room templates can be created. Templates are very important for TRACE because if done correctly it greatly reduces the amount of time spent creating rooms. [How To Set Up TRACE Room Templates](#)

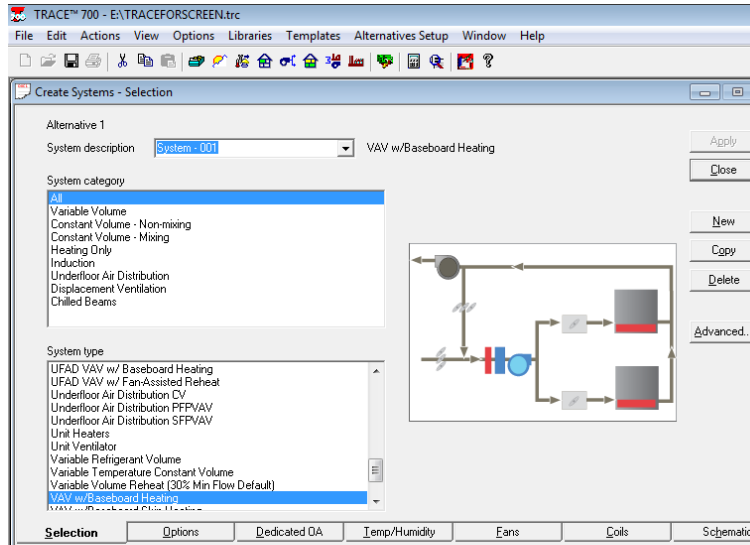


**Create Rooms:** If you have created templates you can select the appropriate template from the left side drop down menus for room, internal, airflow, thermostat, and construction templates. When creating walls, only those that are exterior walls require modeling.

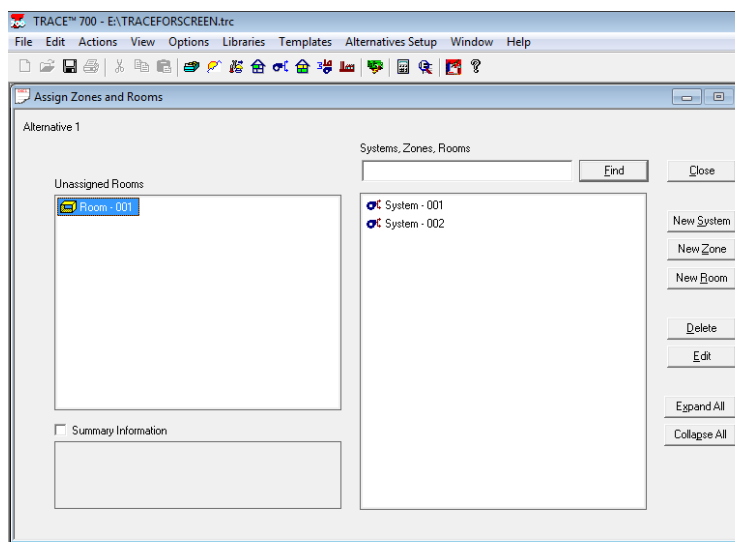
**Advanced tip:** By clicking on actions, change load parameters, then change building orientation, you can rotate the entire building so that you can enter the walls as either 0 (North), 90 (East), 180 (South) and 270 (West). This is much simpler than adding angles between these every time a wall needs a direction entered.



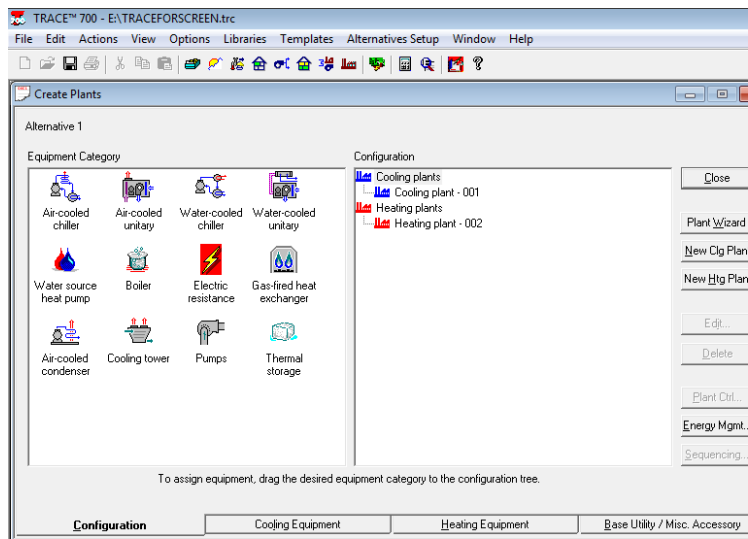
**Create Systems:** Select the appropriate system, and click on new system. You will be able to see this system in the next step when assigning rooms to systems. To ensure that you properly created a system, look on the Project Navigator page to see if the number of systems has increased.



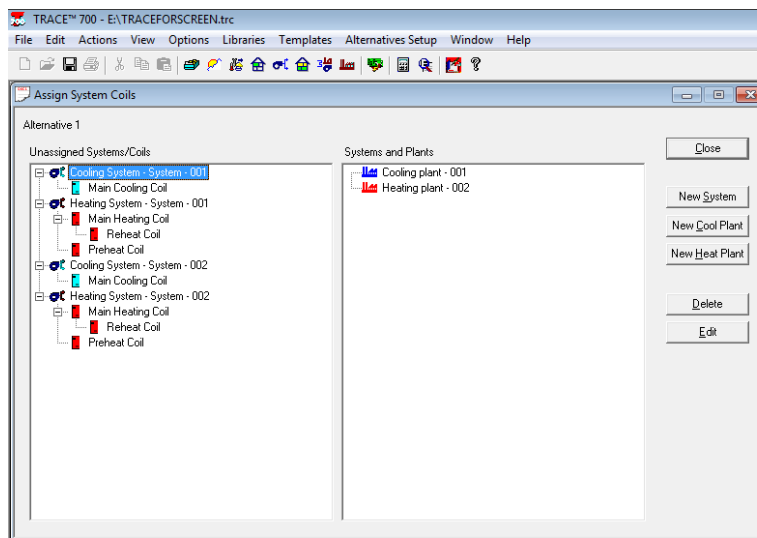
**Assign Rooms to Systems:** Clicking on this button navigates to a new menu that has a space for unassigned rooms and another space for the different systems used in the building. Simply drag the unassigned rooms to the system that will serve it.



Create Plants: Use this to create plants for your mechanical system such as water-cooled chillers or boilers.



Assign Systems to Plants: Just like Assign Rooms to Systems, just click and drag the Unassigned Systems/Coils and drag them under the appropriate Systems and Plants.



**Define Economics:** Here you can define installed equipment cost, maintenance expenses, additional first cost amongst others.

The screenshot shows the 'Economics' dialog box in TRACE 700. It is configured for 'Alternative 1'. The 'Equipment installed cost' is set to 0. The 'Yearly maintenance expense' is 0. The 'Additional first cost' is 0. The 'Revenue penalty' is 0. The 'Building area override' is 100 ft². The 'Building capacity override' is 0 ton. The 'Utility Rate' section shows 'Company' as 'A sample with all utilities', 'Utility' as 'All', 'Inflation' as 0%, and 'Time-of-day schedule' as 'None'. The 'Recurring/Additional Depreciable Cost' section has a table with columns for Cost, Year Incurred, Econ Life, and Depr. Taxes. Buttons for 'Apply', 'Close', 'Add Rate', 'Delete Rate', 'Library', 'Add Cost', and 'Delete Cost' are visible.

**Calculate and View Results:** Once you have completed the above steps, the design, system, energy and economics sections should display as “Ready”. Click calculate and wait for TRACE to complete its analysis. Click the link below to find out how to read and interpret a TRACE output. [How to Read TRACE Outputs \(link needed\)](#)

The screenshot shows the 'Project Navigator' on the left and the 'Calculate and View Results' dialog on the right. The 'Project Navigator' lists tasks: Enter Project Information, Select Weather Information, Create Templates, Create Rooms, Create Systems, Assign Rooms to Systems, Create Plants, Assign Systems to Plants, Define Economics, and Calculate and View Results. The 'Calculate and View Results' dialog shows a table for 'Alternative 1' with columns for Design, System, Energy, and Economics, all marked as 'Not Ready'. Buttons for 'Calculate', 'Scan for Errors', 'Select All', 'Clear All', 'Load Param...', 'Energy Param...', 'View Results...', and 'Close' are visible.

### Helpful Hints:

- Pressing the F1 key at any time brings up the TRACE Help menu. This is a very informative, searchable help feature. This may be utilized for both basic and advanced TRACE tasks.
- After completing one version of your model (or even before) you may create a new alternative by clicking on the Alternatives Setup on the top menu bar, then clicking on New Alternative.